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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,693	02/13/2001	Shigeru Sugaya	7217/63766	4971

7590 07/27/2005

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EXAMINER	
KHUONG, LEE T	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/782,693	SUGAYA ET AL.	
	Examiner	Art Unit	
	Lee Khuong	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,9 and 11* is/are pending in the application.

4a) Of the above claim(s) *2,7,8,10,12 and 13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,9 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3-6, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (6,084,888), hereafter is referred as Watanabe in view of Wang et al. (5,999,535) hereafter is referred as Wang.

Regarding claims 1 and 9, Watanabe teaches a wireless transmitting method and apparatus comprising *the steps of: building a monopayload packet* (see Fig. 2, **an ATM frame 100 which contains only one real ATM CELL 1, with a header 121, a single payload 125 and dummy cells making up for insufficient cells are inserted for the frame 100 to be**

transmitted) *having one of predetermined information units of the information for transmission as a data payload* (see col. 4, lines 11 – 15 and col. 5, lines 58-62, ***a frame has a single packet***),

constituting a multipayload packet having a plurality of the predetermined information units of the information for transmission as a data payload (see Fig. 2, col. 5, lines 27-38, **a second ATM frame 100 which contains multiple ATM cells as in Fig. 2 which comprises a frame header part 104 and a frame payload part 105, in which the frame payload part 105 contains multiple payloads, 126-128**),

adding a predetermined preamble to form a monopayload wireless packet to the monopayload packet and to the multipayload packet to form a multipayload wireless packet (see col. 5, lines 13 – 16, **add a preamble to a frame**), and

carrying out the asynchronous transmission by a wireless transmission packet of *the monopayload packet with the multipayload packet depending on a length of the information to be asynchronously transmitted by wireless* (see col. 4, lines 53 – 67 and col. 5, lines 1 – 9, **the monopayload frame and the multipayload frame are transmitted together by a wireless base station as in Fig. 3, 706**).

Watanabe does not expressly teach the *packet* is *obtained by combining the monopayload packet with the multipayload packet.*

Wang teach the *packet* is *obtained by combining the monopayload packet with the multipayload packet* (Fig. 3, see col. 7, line 57 – col. 8, line 7, **a frame contains multiple cells; wherein each cell can have a monopayload or multipayload as described in Watanabe's reference**).

It would have been obvious to one of ordinary skill in the art, at the time invention was made, to employ the cells-in-frames as taught by Wang into Watanabe to arrive the claimed invention as specified in claims 1 and 9.

The suggestion/motivation for doing so would have been to reduce hardware cost and increase the efficiency of the cells-in-frames network system (see col. 4, lines 24-30).

Regarding claim 3, Watanabe teaches the wireless transmitting method according to claim 1, further comprising *the steps adding common header information to the monopayload packet and the multipayload packet* (see col. 5, lines 6 – 9, **compiling headers of cells with no redundancy information**) and *decoding the header information to make a state of succeeding data payload packets decidable by a communicating station of destination* (see col. 5, lines 17 – 22, **the transmitted frame established frame synchronism and the header information is decoded for FEC to perform error correction**).

Regarding claim 4, Watanabe teaches the wireless transmitting method according to claim 1, further comprising *the step of describing a number of predetermined information units included in the multipayload packet as common header information in the multipayload packet so that the number of continuous information units is specified* (see Fig. 2, 102, **frame control information** or Fig. 4, 417, **apparatus of the frame control information 102 in Fig.** 2, col. 6, lines 6 – 9, **the frame control information generates a sequence number,** *a number of predetermined information units*, **for the transmission frame**).

Regarding claim 5, Watanabe teaches the wireless transmitting method according to claim 1, further *comprising the step of adding a sequence number to the monopayload packet and obtaining the multipayload packet by adding the number for each increase in the information unit included in the packet* (see col. 6, lines 6 – 9, **sequence number includes in each frame**).

Regarding claim 11, Watanabe and Wang teach all claimed limitations set forth in the rejection of claim 9. Watanabe further teaches *receiving means for receiving an access control signal sent from a control device of the wireless network* (see Fig. 3, 705, col. 5. lines 17 – 19),

access control signal decoding means for decoding the access control signal (see Fig. 3, 721, col. 5, lines 19 – 20), and

deciding means (Fig. 3, 704) *for deciding that the relevant access control signal is for its own station, whereby the wireless transmission of the wireless packet is started using the deciding means* (see col. 5, lines 43 – 62).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe in view of Raychaudhuri et al. (5,684,791), hereinafter referred as Raychaudhuri.

Regarding claim 6, Watanabe teaches the wireless transmitting method according to claim 1, further comprising *the steps of adding an error detection code or an error correction code to the monopayload packet and the multipayload packet by said information unit for transmission* (see col. 5, lines 10 – 14, **adding FEC to the header part and the payload part**).

Watanabe does not expressly teach *retransmission is required for each information unit having an error*.

However, retransmission for a lost cell/packet *(for each information unit having an error)* is well known in the art for ensuring quality-of-service in wireless ATM transmission as evidenced by Raychaudhuri.

Raychaudhuri teaches *retransmission is required for each information unit having an error* for an ATM cell with an automatic repeat request, ARQ procedure, (see Fig. 3B, col. 8, lines 40-49, **retransmission for a loss ATM cell with ARQ procedure**).

One skilled in the art would have recognized the advantage of using the ARQ procedure as taught by Raychaudhuri in the system of Watanabe for the purpose of ensuring quality-of-service in wireless ATM transmission.

Thus, it would have been obvious to one skilled in the pertinent art at the time the invention was made to apply Raychaudhuri's teaching of retransmission of an ATM cell in the system of Watanabe for the purpose of ensuring quality-of-service in wireless ATM transmission.

Response to Arguments

5. Applicant's arguments with respect to claims 1 and 9 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Khuong whose telephone number is 571-272-3157. The examiner can normally be reached on 9AM - 5PM.

7. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lee T. Khuong
Examiner
Art Unit 2665

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600